

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

Ag 84F
Vol. 717
rev 120



FOOD FOR YOUNG CHILDREN

CAROLINE L. HUNT

Specialist in Food Preparation and Use, Office of Home Economics



FARMERS' BULLETIN 717

UNITED STATES DEPARTMENT OF AGRICULTURE

Contribution from the States Relations Service

A. C. TRUE, Director

Washington, D. C.

Issued March 4, 1916; revised June, 1920.

Additional copies of this bulletin may be obtained from the
Division of Publications, U. S. Department of Agriculture

SIMPLE, CLEAN, WHOLESOME FOOD of the right kinds fed to children in proper quantities and combinations will go farther than almost any other single factor in assuring them normal health and sturdy development. The principles that should govern the choice of food for children between 3 and 10 years of age and specific suggestions for meals made up of such food are set forth in this bulletin. Meals for children should be served attractively, as the illustrations suggest, to inculcate a sense of neatness and order.

FOOD FOR YOUNG CHILDREN.¹

CONTENTS.

	Page.		Page.
Food groups -----	3	Vegetables and fruits -----	19
Meals for a day -----	6	Bread and other cereal foods -----	20
Milk and dishes made chiefly from it -----	10	Butter, cream, table oils, and other fatty foods -----	23
Meat, poultry, fish, eggs, and simi- lar foods -----	15	Sweets -----	24
Beans, peas, peanuts, and other legumes -----	18	Water -----	24
		Children's parties -----	25
		Summary -----	25

A CHILD between 3 and 10 years of age may be considered well fed if he has plenty of milk, bread and other cereal food, an egg or its equivalent in flesh foods once a day, a little butter, a small portion each of carefully prepared fruits and vegetables, with a small amount of sweet food after his appetite for other foods is satisfied. If any of these is omitted his diet is likely to be one sided.

FOOD GROUPS.

In selecting foods it is often found helpful to think of them as divided into five groups according to their functions in the body or their use in the preparation of meals, namely, (1) vegetables and fruits; (2) milk, eggs, cheese, flesh foods, fish, and legumes; (3) cereals and similar starchy foods; (4) sweets; and (5) fats. Such a grouping of foods is helpful in several ways: First, it calls attention to the several kinds of foods that are necessary to make up a wholesome and good-tasting diet; second, it shows how, in case of necessity, meals can be safely simplified—for example, it calls attention to the fact that meat, eggs, milk, and cheese all have many of the same uses in the body, so that when one can be freely used the others are not so much needed; third, by bringing together under one head all the foods that have about the same uses and separating those that are wholly unlike, it provides a reasonable way of comparing costs. For example, it is reasonable to compare in price such foods of the third group as wheat and rice, or corn meal and oatmeal; it is reasonable also to compare in the first group lettuce with cabbage, or apples with oranges, while it is absurd to compare the price of sugar with that of fruit or the price of butter with that of flour.

¹ Prepared under the direction of C. F. Langworthy, Chief, Office of Home Economics.

Such a classification of foods is helpful in selecting foods for the family as a whole as well as in making special provision for the younger members of the family. The different classes of food are considered below with particular reference to the needs of children.

VEGETABLES AND FRUITS.

A diet without vegetables and fruits is almost sure to lack bulk, flavor, mineral substances, particularly iron, and vitamins. These foods supply a certain amount of body fuel, but this is not their chief use; they are of special value as sources of vitamins and mineral matter.

Vitamins has not yet become a very familiar term. It stands for certain substances which have only recently been discovered and are believed to be necessary for the satisfactory development of the body and for its protection from certain diseases. The vitamins are now believed to be of at least three kinds. One called "A" is soluble in fat and is, therefore, usually referred to as "Fat-soluble A." The other two, "B" and "C," are soluble in water, and are therefore often called "Water-soluble B" and "Water-soluble C." The leaf vegetables, such as spinach, lettuce, and cabbage, are especially rich in fat-soluble A; orange and tomato juice in water-soluble C; and all vegetables and fruits in water-soluble B. It is not correct, however, to say that the diet would necessarily be entirely lacking in vitamins if vegetables and fruits were not used, for fat-soluble A is very abundant in milk and its products and water-soluble B in grains, particularly in the germ or the portion of the grain near the germ. It is, however, true that unless vegetables and fruits are regularly used, the various kinds of vitamins are almost sure to fall below the desired amount.

Some of the vegetables and fruits are also especially useful for certain definite purposes on account of their richness in mineral matter, particularly iron. Spinach, for example, is particularly rich in iron and provides far more of this substance, weight for weight, than any of the other members of its group.

In general, vegetables as a class and fruits as a class differ less from each other than most people think, and can therefore be used to a certain extent interchangeably. When vegetables are cheap and fruits expensive, it is safe to plan for a large amount of the former and a small amount of the latter, and vice versa. In the case of children who are underdeveloped or delicate, it may be necessary to make a special effort to get certain kinds of vegetables and fruits. In the case of healthy children, however, it is better to try to cultivate a liking for all vegetables and fruits, serving them first in the form of their juices; then either in the form of pulp or finely chopped; and finally, if they seem to agree with the children, in the

form in which grown people eat them. It is always well to remember, however, that the sense of taste is keener in children than in grown people and that for this reason it may be necessary to proceed cautiously in serving such highly flavored vegetables as onions and turnips, introducing them gradually into the child's diet in the form of flavoring for soups and stews and in similar ways.

MILK, EGGS, CHEESE, AND FLESH FOODS.

Without these foods the diet is almost sure to be lacking in some of the materials necessary to make body protein. Milk and eggs are especially useful also in providing the vitamin known as fat-soluble A. The foods of this group may be used interchangeably in the diet of the adult, but in the diet of a child nothing takes the place of milk. A good rule to follow is to give the child at least a quart of milk a day and as much more as he will drink or as the family purse can provide. To this may be added an egg every other day, and on the alternate days, fish, poultry, or tender meat, weighing about as much as an egg, i. e., 2 ounces. The high iron content of egg yolk and its richness in fat-soluble A give eggs a special value in the diet if the child is old enough to eat them. This rule about meat and other flesh foods is given rather for the purpose of preventing the use of too much of these foods than for the purpose of insisting on their use.

CEREALS.

These foods have starch as their chief ingredient but they also furnish many of the materials necessary for making body protein and, particularly if they are made from the whole grains, mineral substances and the vitamin called water-soluble B. All the cereals are good food for children, whether served in the form of bread, breakfast foods, or simple desserts. There is no danger that any child will eat too freely of them.

SWEETS.

These foods, which include sugar, molasses, sirups, honey, and other sweets, serve chiefly for flavoring and as body fuel. An ounce of sugar a day or its equivalent in honey, sirup, candy, or some other sweet is sufficient for the child, and not too much if served at the end of a meal so as not to destroy the appetite for other more useful foods. This allowance should include the sugar used in cooking and also that added to foods at the table.

FATS.

These foods, which include among others, butter, and other table fats, cream, oil, and bacon, are especially useful in enriching the diet and in providing body fuel. Some of them, particularly butter and cream, provide the vitamin called fat-soluble A.

MEALS FOR A DAY.

In the feeding of children too much emphasis is often placed on the foods that they ought not to eat and too little on those that they need. The fact is that even those foods that are considered most unwholesome, such as pies and fried foods, are to be avoided quite as much because they crowd out desirable foods as because they cause digestive disturbances. The first thing to do, therefore, in planning a day's food is to arrange three attractive meals that furnish all the needed substances (p. 3) and, particularly in the case of the youngest children, something to serve between meals. For this between-meal lunch, milk, or bread and butter, or simply bread, which any healthy child will eat if hungry, is best. If such food is provided and the child has plenty of sleep and fresh air the problem of keeping unwholesome foods from him will often settle itself. In other words, it is far more important to think about what children need than to let the mind dwell on what they ought not to have.

It is well to form the habit of analyzing every meal or every day's ration to see that it contains all the desirable kinds of food. This does not mean that every necessary kind of food must be served with every meal or that if a given kind of food, fruit for example, is omitted from a meal or from a day's meals the results will be serious. It means rather that in the long run the needed variety is most likely to be furnished if the special uses of the different groups of food are kept always in mind.

SUGGESTED BILLS OF FARE.

In the pictures of a day's meals—breakfast, dinner, and supper—shown in figures 1, 2, and 3, each of the food groups mentioned above is represented by a food which is suitable for a little child. The purpose is to show a day's ration containing enough different kinds of foods in reasonable quantities to meet all the child's needs. Many other meals might have been shown, for there is no food in the pictures except milk which could not have been readily replaced by some other wholesome food. Milk, if it can be procured, should form part of the food of every child, except when for some special reason the doctor objects, and this he seldom does.

The following bills of fare, like those in the pictures, are simple, easy to prepare, sufficiently varied, and if well prepared should taste good. They are so planned that milk and another food from the same group and a food from each of the other groups will be served at least once a day. In each case enough milk should be given to make up the required daily amount, which is at least three-fourths of a quart.

BREAKFAST.

Orange (juice only for the youngest children).

Farina with milk.

Bread and butter.

Apple sauce.

Oatmeal with milk.

Toast and butter.

Baked pears (pulp and juice only for the youngest children).

Milk toast.

Cocoa.

Stewed prunes (pulp and juice only for the youngest children).

Corn-meal mush and milk.

Toast and butter.

Grapefruit (juice only for the youngest children.)

Milk toast with grated yolk of hard-boiled egg.

Apple (scraped for very little children).

Toast.

Hot milk.

In each case enough milk should be given to make up the required daily amount, which is at least a pint and a half.



FIG. 1.—Start the day right with a good breakfast. The breakfast shown in the illustration consists of milk, cereal mush, baked apple, toast, and butter.

DINNER.

Meat soup.
Egg on toast.
String beans.
Rice pudding.

Baked potato, with meat gravy.
Asparagus.
Bread and jelly.

Lamb stew with carrots and potato,
particularly the vegetables.
Twice-baked bread.
Tapioca custard.

Creamed potatoes.
Green peas.
Stewed plums with thin cereal-milk
pudding.

Baked halibut.
Boiled potatoes.
Stewed celery.
Boiled rice with honey or sirup.

Broiled meat cakes.
Grits.
Creamed carrots.
Bread, butter, and sugar sandwiches.

In each case enough milk should be given to make up the required daily amount, which is at least a pint and a half.



FIG. 2.—The chief meal should come in the middle of the day. The dinner shown here consists of egg and toast, greens, milk, bread and butter, and rice with jelly.

SUPPER

Baked potatoes, served with cream and salt, or with milk gravy.
Cookies.

Bread and milk.
Apple sauce.
Sponge cake.

Potato-milk soup.
Twice-baked bread.
Marmalade sandwiches.

Graham crackers and milk.
Baked custard.

Milk toast.
Stewed peaches.
Cup cake.

Celery-milk soup.
Toast.
Floating island.



FIG. 3.—Simple suppers are best. The supper shown above consists of bread and milk, plain cookies.

Though all of the foods mentioned in the bills of fare can be included under five heads, the diet need not be monotonous, for many foods come under each class. The use of the foods of the different groups are discussed in the pages that follow in the order of their importance in the child's diet.

MILK AND DISHES MADE CHIEFLY FROM IT.

Milk, being a liquid, is sometimes classed with water, tea, and coffee, simply as a beverage, by those who do not understand its value as food. This is a great mistake. If all the water were to be driven off from a quart of tea or coffee, almost nothing would be left, and the little that remained would have little or no value as food. If, on the other hand, the water were driven off from a quart of whole milk, there would be left about half a cupful of the very best food substances, including butter fat, a kind of sugar not so sweet as granulated sugar and known as "milk sugar," and also materials which are needed to make muscles, bones, teeth, and other parts of the body. All these valuable food substances are ordinarily either dissolved or floating in the water of milk. Milk is also very important for providing the growth-promoting substance called fat-soluble A. Apparently nothing can serve so well as the basis for the diet of the healthy child.

Good whole milk is desirable, but if a mother is obliged to choose between clean milk and rich milk, she had better take the clean milk. Best of all, of course, is clean whole milk, but if that can not be obtained it is better to use clean fresh skim milk than dirty or questionable whole milk. A quart of skim milk, even separator skim milk, contains about a third of a cupful of solid food, which is nearly all there was in the whole milk, except the butter fat. When it is absolutely impossible to get fresh milk, condensed, powdered, or evaporated milk may be used.

Compared with most other foods, milk contains much lime but very little iron. Spinach and other green vegetables and egg yolks are, on the other hand, very rich in iron. This is one reason why combinations of egg yolks and milk and of vegetables and milk are mentioned so often in this bulletin.

When milk is given to babies the chill is usually taken from it. It is safe to do this for all young children. When milk is used as a drink it should be sipped, not gulped down.

Besides being served as a beverage, milk is often combined with many other foods, as follows:

BREAD AND MILK.

This may well be the chief, if not the only, dish in the supper of little children. If the milk is not very rich, the bread should be spread with butter. Use well-baked bread, at least a day old, or toast, or occasionally crackers.

CEREALS AND MILK.

Thoroughly cooked cereals served once a day for the first course and once a day for dessert encourage the use of milk. Directions for preparing them will be found on page 22. Any cereal may be cooked in milk besides being served with it. Skim milk which might otherwise be thrown away may be used for the purpose. Rice, cooked in an uncovered double boiler, or in a pan in a very "slow" oven, can be made to absorb about six times its volume of skim milk. To cook a cupful of rice in this way instead of in water may be considered equivalent, so far as tissue-forming materials are concerned, to serving it with half a pound of lean beef.

MILK TOAST.

The following is a good method for making milk toast: Put on the table hot crisp toast or twice-baked bread (see p. 21) and a pitcher of hot milk, slightly salted. One-fourth teaspoonful of salt to a cupful of milk is sufficient. Pour the milk over the toast as needed, using hot bowls or deep saucers for serving. This is the easiest way of serving milk toast, and, if care is taken to have all the dishes hot and to salt the milk, it is usually acceptable. A supply of twice-baked bread can be kept on hand and heated as needed to crisp it.

Another way to make milk toast is to thicken milk and pour it over toast. For 1 cup of milk allow $1\frac{1}{2}$ level teaspoons of flour and $\frac{1}{4}$ teaspoon of salt. Make a smooth paste out of the flour, salt, and a little of the milk. Heat the rest of the milk; add the flour and milk mixture and boil for about 5 minutes, stirring constantly, or cook for 20 minutes in a double boiler, stirring constantly at first and frequently later on. If skim milk is used, a level teaspoonful of butter or bacon fat should be added after the gravy is prepared.

An easier and quicker method of making the sauce or "milk gravy" is to cook the flour thoroughly in a tablespoonful of fat before adding the milk. This, however, is not thought to be so wholesome as the kind of gravy in which the flour is cooked in the milk.

Milk gravy may be combined with dried beef or salt codfish which has been cut into small pieces and soaked in warm water, or with small pieces of tender meat, chicken, fish, or vegetables. Such gravy may be served with toast, with baked or boiled potatoes, or with boiled rice or other cereals. Dishes of this kind are more suitable for dinner than for supper.

Milk toast with the yolk of a hard-boiled egg grated over it makes an attractive dish. The whites of the hard-cooked eggs are not

suitable for a young child nor for any child unless they are finely chopped or unless the child can be made to chew them well.

COCOA.

For variety, milk flavored with cocoa may be served. Prepared cocoa is the most convenient, but cracked cocoa shells or nibs, which require long boiling, may be used. A warm drink, made chiefly out of cocoa and water, is not to be confused with the more nourishing drink made by flavoring milk with cocoa, but it has its uses. Like clear soups, which contain little food in themselves, it may lead the child to eat freely of bread and other needed foods.

MILK SOUPS.

Another good way to serve milk to children is in soups. Milk-vegetable soups are made from cooked vegetables, chopped or strained, which in this form may be given to even the youngest children, and milk (whole or skim) slightly thickened. The vegetable may be asparagus, peas, beans of various kinds, celery, potatoes, turnips, carrots, spinach, kale, chard, beet roots or greens, parsnips, lettuce, cress, cauliflower, or almost any other.

GENERAL RECIPE FOR MILK-VEGETABLE SOUPS.

2 cupfuls of milk.
1 tablespoonful of flour.
1 tablespoonful of butter.
Salt.

$\frac{2}{3}$ of a cupful of a thoroughly cooked vegetable, finely chopped, mashed, or put through a sieve.

Thicken the milk with the flour as for milk gravy; add the other ingredients. If the soup is too thick, as it may be if the vegetable is starchy, thin it with milk or water. Milk tomato soup is not recommended for the youngest children. When it is served a little soda should be added to prevent the milk from curdling.

MILK STEW.

1 quart of milk.
1 cupful raw potatoes cut into small pieces.

2 tablespoonfuls of butter or bacon fat.
1 cupful of salt codfish cut into small pieces or just enough to flavor the stew.

Soak the fish in lukewarm water until it is soft and the salt removed. Cook the potatoes in water until tender, drain them, add the milk and codfish, and bring to the boiling point; add the butter, and salt to taste.

In place of the codfish any other salt or fresh fish, oysters, or a little chipped beef may be used. Or the fish may be omitted and the soup made savory and palatable by adding a few drops of onion juice, or a vegetable cut into small pieces and cooked thoroughly.

CEREAL-MILK PUDDINGS.

Puddings made with milk and bread, rice, or some other cereal food, have long been recognized as desirable in the child's diet.

Such milk puddings as old-fashioned rice or Indian pudding may be the means of serving much milk in a wholesome way. From the following recipe for rice pudding other recipes can be easily made, the proportions in all cases being about the same:

GENERAL RECIPE FOR CEREAL-MILK PUDDINGS.

For a quart of milk allow one-third of a cupful of any coarse cereal (rice, corn meal, cracked wheat, oatmeal, or barley) and one-third of a cupful of brown, white, or maple sugar, sirup, honey, or molasses; one-half teaspoonful of salt; one-eighth teaspoonful of spice. The spice may be omitted when honey or molasses is used.

RICE PUDDING.

1 quart of milk.
 $\frac{1}{3}$ cupful of rice.
 $\frac{1}{3}$ cupful of sugar.

$\frac{1}{2}$ teaspoonful of salt.
 $\frac{1}{8}$ teaspoonful of ground nutmeg or cinnamon, or the grated rind of $\frac{1}{4}$ of a lemon.

Wash the rice thoroughly, mix the ingredients, and bake three hours or more in a very slow oven, stirring occasionally at first.

The above recipe makes quite a large pudding. It is often convenient to make a smaller one, and enough for a child's dinner can be made in the double boiler, allowing 2 level or 1 rounding tablespoonful each of cereal and of sugar (or other sweet) to a cupful of salted and flavored milk. Cook an hour or more without covering.

These puddings, if made thin, may be poured over stewed prunes or other cooked fruits, and are a good and economical substitute for the cream or soft custard often used for that purpose.

CUSTARD AND OTHER MILK PUDDINGS.

There are many other milk dishes which are used in the same way as this milk and cereal pudding. Recipes for some of them follow:

Junket, or "rennet custard," is milk that has been coagulated or curdled, a process not unlike one of the first steps in digestion. The curdling is brought about by the addition of "junket tablets" to the milk. Milk containing rennet will, if not disturbed, "set" in one piece resembling a custard. Junket differs little from milk in food value except for the presence of the sugar used for flavoring, but it gives variety to the diet. If served very cold it is refreshing in warm weather.

JUNKET.

2 cupfuls of milk.	$\frac{1}{2}$ teaspoonful of salt.
$\frac{1}{4}$ cupful of sugar, honey, or sirup.	A few grains of nutmeg or cinnamon.
1 junket tablet.	

Warm the milk to about the temperature of the body, crush the tablet, and add it with the other ingredients to the milk. Pour into one large or several small dishes and place in a warm (not hot) place to harden. Cool before serving.

BOILED CUSTARD.

3 egg yolks.	$\frac{1}{2}$ teaspoonful of salt.
2 cupfuls of milk.	Flavoring.
$\frac{1}{4}$ cupful of sugar, honey, or sirup.	

Heat the milk in a double boiler. Thoroughly mix the eggs and sugar and pour the milk over them. Return the mixture to the double boiler and heat it until it thickens, stirring constantly. Cool and flavor. If the custard curdles, remove it from the fire and beat or stir vigorously. This custard may be served in place of cream on many kinds of dessert.

FLOATING ISLAND.

In this dish the whites of eggs left over from boiled custard can be used to serve with it. Beat the whites until stiff, sweeten them a little, and cook them in a covered dish over water which is hot but not boiling, or cook them on top of the hot milk which is to be used in making custard. Lift them out with a wire egg beater or split spoon, and place on top of the custard. Decorate with small bits of jelly.

TAPIOCA CUSTARD.

Tapioca custards may be made as follows: Add to the list of ingredients for boiled custard one-fourth cupful of pearl tapioca. Soak the tapioca in water for an hour or two, drain it, and cook in the milk until it is transparent. Proceed as for boiled custard.

BAKED CUSTARD.

In making allow 1 egg and 2 level teaspoonfuls of sugar and a few grains of salt and of nutmeg for each cupful of milk. Beat the eggs slightly and add the other ingredients. Bake in cups set in a pan of water in a moderate oven.

SIMPLE ICE CREAMS.

In the way they are used, ice creams and frozen custard may be grouped with the puddings. Plain ice cream made out of thin cream, sweetened and flavored, or out of cream and custard mixed, may be given to children occasionally.

A good ice cream may be made as follows: Allow one-fourth cupful of sugar to each cupful of thin cream (half milk and half cream), flavor and freeze.

A frozen custard, commonly called by housekeepers "ice cream" or "French ice cream," which contains eggs as well as milk and cream, may be made as follows: For each half cupful of milk allow one-fourth cupful of sugar, one or two egg yolks or one whole egg, and a half cupful of cream. Make a custard out of all the ingredients but the cream. When it is cool add the cream and flavoring, and freeze.

CARAMEL FLAVORING FOR USE IN CUSTARDS, ICE CREAMS, AND OTHER DESSERTS.

An economical flavoring for any of the above desserts may be made by browning, or caramelizing, ordinary sugar. To each cupful of sugar add one-fourth of a cupful of water. Heat until well browned, stirring constantly, even after the dish has been taken from the fire, and until the danger of burning in the hot dish is passed. Before the mixture hardens, add hot water and cook until it is about the consistency of thick sirup. Bottle and save for use as needed.

MEAT, POULTRY, FISH, EGGS, AND SIMILAR FOODS.

The other foods included in the group with milk (considered by far the most important of them all for children) are meat, poultry, fish, eggs, and meat substitutes.

In some families children do not get enough meat and eggs; in others they get too much. A good general rule commonly followed is to give a child 2 years old or over an egg every other day, and about the same amount (2 ounces) of meat, fish, or poultry on the days that come between. If for any reason these are omitted from the child's diet, special care must be taken to see that other suitable foods take their place—preferably an extra amount of milk.

Broiling and roasting are the best methods of preparing tender meat. Tough meat should be stewed or prepared in a fireless cooker, or first chopped and then broiled.

It is important to teach children to chew meat and other foods properly.

Fried meats, particularly those which are pan fried or cooked in a small amount of fat, should not be given to young children. One reason for this is that they are likely to be overcooked and tough, at least on the outside, and so are likely not to be properly chewed and to be swallowed in large pieces. Another reason is that the fat used in frying and also that which fries out of the meat is likely to be scorched and changed in composition. When this is the case, it is almost certain to be harmful.

Some recipes for cooking meat for children follow:

BROILED CHOPPED MEAT.

Many cuts of meat too tough to be broiled whole may be prepared very satisfactorily by being chopped, salted, and broiled. Allow about one-half teaspoonful of salt to a pound of meat. For very little children the meat should be scraped instead of being chopped, for in this way the connective tissue is taken out. An egg or a little milk may also be added. The most important point is careful handling, for if the meat is pressed together it becomes tough and hard. If a wire broiler is used, the cakes should not be squeezed between the two sides. To avoid this, lay them on top of the broiler and turn them with a knife and fork.

MEAT STEWS.

Stews made out of meat and vegetables offer a very great variety of dishes, good in themselves and good also because they encourage the eating of bread. The meat used should, of course, be in good condition but need not be from a tender cut. The lower-priced cuts may be used with good results, provided they are made tender by long, slow cooking. Any vegetable may be added, including the tougher parts of lettuce and the leaves of celery. Rice, barley, macaroni, or even crusts of stale bread may be used in the stew to give variety. A stew containing a little meat, with one or more vegetables and a cereal, comes near to supplying all the needed foods other than milk.

MEAT STEW.

2 pounds of one of the cheaper cuts of beef.	4 cups of potatoes cut into small pieces.
$\frac{3}{4}$ cup each of turnips and carrots cut into $\frac{1}{2}$ -inch cubes.	$\frac{1}{2}$ onion, chopped.
	$\frac{1}{4}$ cup of flour.
	Salt.

Cut the meat into small pieces, cover with boiling water, boil for five minutes, and then cook at a lower temperature until the meat is tender. This will require about three hours on the stove or five hours in the fireless cooker. Add the carrots, turnips, and onions, and salt during the last hour of cooking, and the potatoes 20 minutes before serving. Thicken with the flour diluted with cold water. If the dish is made in the fireless cooker, the mixture must be reheated when the vegetables are put in. If foods depended on for vitamins are scarce, cook the vegetables separately from the meat so as to avoid the danger from overcooking them.

There is much to be said in favor of keeping a soup pot on the stove all the time, provided great care is taken not to allow the contents to grow stale. Into this pot can go clean portions of uncooked

food and also clean foods left from the table, such as meat, milk, mashed potatoes, or other vegetables, crusts, cold cereal mushes, and even fruits. Soups made from such materials may not have great nutritive value, but, like those made out of materials bought for the purpose, they encourage the use of a large amount of bread, particularly if carefully seasoned.

POULTRY.

Chicken or turkey can be used for variety in a child's diet and are palatable stewed and served with rice. If roast chicken is used, select portions which are tender. It is well not to give a young child either highly seasoned stuffing (dressing) or rich gravy.

FISH.

The use of cured fish, fresh fish, and oysters in stews has been spoken of above. Boiled or stewed fish is also good for variety.

EGGS.

Eggs are especially useful food for young children. The chief point to remember in preparing them for children is that they must not be overcooked or they are likely to cause indigestion, as experience has shown. Every one knows how the heat of cooking hardens the egg, and it is easy to understand why the digestive juices might have difficulty in penetrating such hard substance as the white of a hard-boiled egg. Overcooked yolks are also thought to be hard to digest. However, when eggs are cooked in the shell the heat reaches the white before it does the yolk, and so there is more danger of the white being overcooked than of the yolk. The best ways of serving eggs for children are poached, soft boiled, or coddled, though they may be scrambled for a change if one is careful not to scorch the fat used or to overcook the egg.

CODDLED EGGS.

Many means have been suggested for cooking eggs in such a way that the yolks will be cooked and the whites will not be overcooked. One of the most satisfactory is by coddling, which is done as follows: Allow a cupful of water to each egg, bring the water to the boiling point, remove it from the fire, put in the eggs, cover the dish closely, and leave the eggs in the water for about seven minutes. There is some uncertainty about this method, for eggs differ in weight and also in temperature at the time the cooking begins. On the whole, however, this method can be more depended on than others. Good results can be obtained by pouring hot water over

eggs, if the same dish with the same amount of water is always used, but each cook must make her own rules.

GELATIN.

Gelatin can be used in the preparation of a great variety of attractive desserts which are liked by young as well as by old and are for this reason convenient for occasional use in families where adults and children must both be provided for. Gelatin is used in such small amounts that it can not be relied upon to furnish much nourishment. It takes up a large amount of water, however, and forms bulky or light desserts. Such desserts, which include also succulent fruits and fruit ices, are particularly acceptable after a comparatively heavy meal. Gelatin is a good means of introducing fruit juices, and to some extent also vegetable juices like those of tomatoes and cucumbers, into the diet. These juices contain vitamins, some of which are probably destroyed by heat so that it is well to know a variety of ways of serving them raw. One of these ways is in the form of gelatin desserts.

SNOW PUDDING.

1 tablespoonful granulated gelatin.	$\frac{1}{4}$ cup sugar.
$\frac{1}{4}$ cup cold water.	$\frac{1}{4}$ cup lemon juice.
1 cup boiling water.	Whites of 3 eggs.

Soak gelatin in the cold water and then dissolve it in the hot water. After adding the sugar and lemon juice, strain and set aside to cool, stirring occasionally. When it is quite thick, beat with an egg beater. Add the well-beaten egg whites and continue to beat until it is stiff enough to hold its shape. Mold or pile by spoonfuls on a glass dish. Serve with a soft custard made with the egg yolks.

Variety can be obtained in this dish by substituting fruit juices for all or part of the water. Fruit juices like those of grapes and berries that are not injured in flavor by heat can be used in place of the water for dissolving the gelatin, though this may of course destroy some of the vitamins.

BEANS, PEAS, PEANUTS, AND OTHER LEGUMES.

Among vegetable foods, dried beans, peas, lentils, cowpeas, and peanuts, which are often classed together and called legumes, are the best substitutes for meat in the diet of older people, chiefly because they have large amounts of nitrogen needed for muscle building. In this respect they have some advantage, though not a great one, over cereals. Beans and the other legumes are not to be recommended for young children except when milk, meat, eggs, fish, and poultry are not to be obtained. When used they should be cooked until they are reduced to a mush. Since the skins are likely to be tough, it is well to put the cooked legumes through a sieve.

A general recipe for soups made from beans, peas, lentils, cowpeas, and other legumes follows:

SOUP FROM DRIED BEANS OR OTHER LEGUMES.

1 cup dried legumes.	2 teaspoonfuls of flour.
1 quart of water or soup stock.	Salt and other flavoring.
2 tablespoonfuls of butter or savory fat.	

Soak the dried legumes in water overnight. Drain, add the water or stock, cook slowly on top of the stove for three hours or in a fireless cooker for four or five hours, or until tender. Renew the water as it boils away. Strain and thicken with the fat and flour rubbed together. These soups may be flavored in many ways. Sometimes a tomato, an onion, a few celery tops, a sprig of parsley, or a mixture of vegetables is boiled with the beans or peas, or just before serving a few drops of onion juice, a little celery salt, or one-fourth level teaspoonful of curry powder is added. Sometimes the water used is that in which ham or other meat has been boiled, but in such cases care must be taken not to have the liquid too fatty.

A good way to serve peanuts to children is in the form of peanut butter. This can be used in sandwiches or can be made into soup by the addition of milk, water, stock, or vegetable juices.

VEGETABLES AND FRUITS.

Vegetables are an important but often a neglected part of a child's diet. It is well to serve them at least once a day, as they help to keep the bowels in good condition. Several of the ways of accustoming the child to the taste of unfamiliar vegetables have already been suggested here. They may be used as flavoring for soups and stews, may be added to milk or meat stews, or served with meat gravy. If gravy is used, it should not be too fat nor made with scorched fat.

Young children may be given the young and tender parts of celery and lettuce, a satisfactory way of serving being in the form of sandwiches. For this purpose they should be slightly salted and the celery should be chopped or cut into small pieces.

All vegetables, whether served raw or cooked, require very careful cleaning. Large vegetables, like potatoes and carrots, should be scrubbed with a brush. Greens should be washed leaf by leaf under running water, or in a large amount of water. In the latter any sand which clings to them is likely to sink. To prevent it from again getting on the vegetables, lift them from the water instead of pouring the water off.

Steaming, boiling, baking, and stewing are good ways to prepare vegetables for children. If the supply of fresh vegetables is not generous, the juice in which they are cooked should be used with

them as far as possible, or put into soups or stews. In general, vegetables should be cooked in as small amounts of water as possible.

Experience has shown that vegetables, particularly green vegetables, such as peas, spinach, and cabbage, taste best when cooked until tender, but not until they have lost their form and flavor.

Vegetables should be served either quite simply or with a little milk, cream, or butter, to improve or vary the flavor. As said before, oil may be served on greens instead of butter. These simple methods are better than complicated ones like frying or scalloping. For the smallest children such vegetables as greens should be finely chopped, and if the tougher portions of other vegetables, the skins of green peas, for example, are found to disagree with a child, these portions can be removed by putting the cooked vegetables through a sieve. No such vegetables as raw radishes or cucumbers, which might easily be swallowed in large pieces, should be given to small children.

Fruits are also very important in the child's diet. They supply mild acids, and they are important for their flavor, for their laxative effects, and no doubt for other reasons. The laxative effect is well recognized in the very general use of orange juice, prunes, and apples. Then, too, the fruits, like the vegetables, have mineral elements which the body requires.

It is well to serve fruits in some form at least once a day. In general, the same rule should be followed as for vegetables in deciding in what form they shall be served. Fruit juices and the pulp of cooked fruit, baked apples and pears, and stewed prunes, for example, are safest. Whether the skins shall be given depends partly on the age and health of the child and partly on the way the fruit is prepared. If the skins are very tender, they are not likely to cause trouble, except with very young children. When apples and pears are baked the skins can be made tender by frequent basting.

BREAD AND OTHER CEREAL FOODS.

Cereal foods of some sort are used by children practically all over the world. Bread is the commonest cereal food in this country, though cereal mushes are also very generally used. Well-baked bread and thoroughly cooked breakfast cereals are both good for children and with milk should make up a large part of the diet. These two foods, bread and breakfast cereals, provide almost the same kinds of nourishment. Bread may therefore take the place, to a certain extent, of cereal mushes, and cereal mushes may take the place of bread, but neither can take the place of milk, meat, eggs, fruits, and vegetables.

An ordinary slice of bread (a $\frac{3}{4}$ -inch slice cut from an ordinary loaf) is equal in food value to about half a cupful of boiled or steamed cereal and to about a cupful of puffed or flaked cereal. The

mother who must feed her child very economically should calculate the cost of each and decide which is cheapest.

The relation of food to the condition of the bowels is an important matter. Grains, particularly those containing the outer or branny layer or coats, are laxative; so, too, are such mildly acid fruits as apples, oranges, and prunes. So far, therefore, as the important matter of preventing constipation is concerned, coarse grains and mildly acid fruits serve the same purpose. When fruits are to be obtained in abundance, the kind of cereal served is not of great importance. When they are not, the coarser cereals should be used. In the case of both cereals and fruits, it is possible to *overdo*. Sometimes the coarser parts, such as bran and skin, do not agree with the child and, under these circumstances, they should be removed from the food before it is served. Some mothers find it necessary to strain oatmeal porridge, for example, and to remove the skins of apples.

BREAD.

The yeast-raised bread given to young children should be at least a day old or should be toasted or twice baked. Most hot breads are likely to be swallowed in large pieces and are therefore not desirable. Hot breads which are almost all crust, like thin tea biscuits or crisp rolls, are least likely to cause trouble.

MILK TOAST.

This very common cereal dish has been discussed under milk. (See p. 11.)

TWICE-BAKED BREAD.

Bread cut or torn into small pieces and heated in a very slow oven until thoroughly dried and very delicately browned is good food for children. The warming oven of a coal stove is about hot enough for this purpose. In the case of gas ovens it is often difficult to get the gas low enough without having the door open a little way. The advantage of tearing instead of cutting the bread is that it makes it lighter in texture and easier to eat. The crust can be torn off from all but the ends of a loaf of bread in one piece. This crust should be torn into pieces about 2 inches wide. The inside of an ordinary loaf of bread will make 16 pieces of convenient size. Tear first across the loaf and then tear each half into eight pieces. It is usually necessary to make a small cut first in order to start the tearing. It is well to keep the crusts separate, as otherwise they are likely to get too brown. Such bread will need to be reheated before being served unless it is kept in a warm place, like a warming oven.

The above is also a good way to use stale bread. Some people crush it and use it with milk as a breakfast food.

BREAKFAST CEREALS.

Cereal mushes and other breakfast cereals are very common foods. Almost all of the well-known grains are used for this purpose, and there are many such products, owing to differences in manufacture.

Except when used for dessert, cereal mushes and ready-to-eat cereals should be served with milk and with very little, if any, sugar. If the cereals are heavily sweetened, children are likely to eat so much that they neglect other and much-needed foods. If carefully salted, mushes are more likely to satisfy the taste without sugar than otherwise. Well-cooked cereals with milk or stewed fruit or a little molasses, sirup, honey, or sugar make good desserts for dinner, lunch, or supper. If preferred, dried fruits, like dates and raisins, may be cooked with the cereal to sweeten it and to give flavor.

COOKING CEREAL BREAKFAST FOODS.

It is hard to give general rules for cooking cereals, for there are so many kinds, but it is safe to say that there is no danger of overcooking and much danger of undercooking them. Some grains need longer cooking than others—corn meal, for example, needs at least three hours and rice hardly more than half an hour. In general, whole grains, like whole wheat, or grains more or less finely broken, like cracked wheat, require longer cooking (three hours at least) than more finely-ground grains, which should be cooked one hour at least. Breakfast foods made from grains with the outer coverings left on require more cooking than those with the outer covering removed—whole barley, for example, more than pearl barley. Many cereal foods, particularly the rolled and flaked types, have been partially cooked at the factory. These require less cooking in the home than those which have had no such treatment; but if they are to be served to children such cereals should be cooked at home for at least an hour. There are also cereal breakfast foods which have been still more thoroughly cooked at the factory, either by parching in addition to flaking or by some other special method. These are improved by putting them into the oven long enough at least to crisp them.

Oatmeal, corn meal, and many other granular cereals can be put directly into cold water and cooked satisfactorily in a double boiler without stirring, the method being particularly good in the case of corn meal, which is likely to be lumpy if stirred into hot water. A convenient method for cooking cereals is to mix with the usual quantity of water, bring to the boiling point, boil for three or four minutes, and then put into a fireless cooker and leave 10 or 12 hours. Porridge or mush made in this way must be reheated before serving.

The quantity of water required differs with the cereal. A cupful of rolled oats requires at least 2 cupfuls of water; oatmeal or corn meal, 4 cupfuls; and rice, 3 cupfuls.

A level teaspoonful of salt to a cupful of cereal will usually be right, but it is well to experiment a little with an unfamiliar cereal, since failure to salt mushes properly very often leads children to dislike them.

Popped corn or popped kafir have much the same food value as breakfast foods and can be served occasionally to healthy children. These foods, served with milk, make a more nearly complete ration than when eaten with butter or sugar, as they frequently are between meals.

BUTTER, CREAM, TABLE OILS, AND OTHER FATTY FOODS.

Fat is an important part of the food of children. This is not surprising, for it is found in considerable amounts in human milk, the natural food for babies. Butter, which consists chiefly of separated milk fat, and cream, which is rich in milk fat and also in the other nourishing substances of milk, are both wholesome. Salad oils of various kinds (olive, cottonseed, peanut, and others) may be given to children in small amounts. Those who are not used to table oil must often be trained to like it. This can usually be done by introducing it very gradually into the diet. A good way is to serve a little on spinach and other greens or on tender salad vegetables.

There is more than an ounce of fat (at least $2\frac{1}{2}$ level tablespoonfuls) in a quart of whole milk. If the healthy child is given a quart of milk and has butter on his bread, he gets enough fat, and that which he receives is in wholesome form. It is well, therefore, not to give such fatty foods as pastry, fried meats, and vegetables, and doughnuts or rich cakes, as experience has shown that in these the fats are not in so good a form for children. If the child is constipated, the occasional use of cream or salad oil is desirable, for fat in abundance is laxative.

Bacon or salt pork, cut very thin and carefully cooked, may be given occasionally, but thick pieces with much lean are not desirable. In preparing bacon or salt pork it is very important not to burn the fat. To avoid this they should be cooked in one of the following ways: Put the slices on a broiler or wire frame over a pan; place the pan in a hot oven and cook long enough to remove most of the fat. Or keep a pan on purpose for cooking bacon on top of a stove and let the fat which fries out of it collect in the pan, taking care that none is burned. In time so much fat will collect that bacon can be dropped into this hot fat and will be less likely to burn than if placed on a hot pan.

SWEETS.

Simple sweets are such things as lump sugar, maple sugar, sirups, honey, and plain candy, and those foods in which sugar is combined in simple forms with fruit juices (in lemonade, water ice, jelly, etc.), with flour or starch, as in plain cakes (cup cake, sponge cake, cookies), and with fruit, as in jams, marmalades, and similar things. Sweets which contain much fat, like rich cakes and pastry, and foods



FIG. 4.—Little children need food between meals. Milk is better than candy.

which are made rich with nuts or dried or candied fruits, or those which are highly flavored or spiced, can not be classed as simple sweets.

Sugar is a desirable part of the diet, and the only objection which can be raised to its use in reasonable amounts in a mixed diet is that it is sometimes allowed to take the place of foods which come under the other groups mentioned in this bulletin, and so spoils the child's appetite for those other important things. Under these conditions it is harmful, because its improper

use leads to bad food habits. Sweets should not be given between meals or during the first course of a meal. (Fig. 4.) Careful mothers who forbid their children eating candy at odd times sometimes give one or two pieces of wholesome candy as a "treat" with dessert at dinner.

WATER.

By no means the least important of the matters to be thought of in connection with the feeding of children is the drinking water. It goes without saying that the water given to children, as well as that used for all table and cooking purposes, should be pure. If the house-

keeper has any reason to think that the water which she is using has become impure in any way she should boil it, and, after having boiled it, she should not permit it to become impure again. It should be put into clean vessels only and should not be cooled by the addition of ice, unless the ice is known to be as clean as the water. A better way to cool water is by placing it near the ice or in some other cool place. Most healthy children can drink water that has been cooled by being placed next to the ice, but for delicate children such water should be warmed a little. The only danger in giving very cold foods is that they will cool the contents of the stomach too much, and this danger can be avoided by sipping the water or taking it slowly.

Fruit juices, fruit drinks like lemonade, plain or flavored with other fruit juices, and fruit ices are attractive ways in which to give water to children, but most mothers are too busy to prepare them except for sick children or for parties or other festive occasions.

CHILDREN'S PARTIES.

Children's parties present special problems because they give the mother the responsibility for feeding other people's children. One danger connected with such occasions, that of overeating, will be lessened if the refreshments are served at such a time as to take the place of one of the regular meals of the day. The same care should be taken in selecting foods as in the case of the ordinary meals. No hard, tough, rich, or highly seasoned foods should be served. Cocoa or some other milk drink; fruit; sandwiches; ice cream or a gelatin dessert; plain, frosted cake; and simple candies make a good bill of fare. In general, it is well to divert the attention of the children, as far as possible, from the foods themselves, by making the table attractive and by serving simple food materials in unusual ways and forms.

SUMMARY.

In this bulletin some general principles which should govern the young child's diet are stated and facts are given about foods the child should have and about cooking them.

At the close of the day the mother might ask herself questions like the following to make sure that she has taken into account the things she should consider:

Did the child take at least a pint and a half of milk in one form or another?

Have I taken pains to see that the milk that comes to my house has been handled in a clean way?

If I was obliged to serve skim milk for the sake of economy or because it was cleaner than the whole milk available, did I supply a little extra fat in some other way?

Were the fats which I gave the child of the wholesome kind found in milk, cream, butter, and salad oils, or of the unwholesome kind found in doughnuts and other fried foods?

Did I make good use of all skim milk in the preparation of cereal mushes, puddings, or otherwise?

Were all cereal foods thoroughly cooked?

Was the bread soggy? If so, was it because the loaves were too large, or because they were not cooked long enough?

Did I take pains to serve more than one kind of cereal food once during the day?

Did I keep in mind that while cereals are good foods in themselves, they do not take the place of meat, milk, eggs, fruit, and vegetables?

Did I keep in mind that children who do not have plenty of fruit and vegetables need whole-wheat bread and whole grains served in other ways?

Did each child have an egg or an equivalent weight, about 2 ounces, of meat, fish, or poultry?

Did any child have more than an egg or 2 ounces of flesh foods a day? If so, might the money not have been better spent for fruits or vegetables?

Were both vegetables and fruits on the child's bill of fare once during the day? If not, was it because pains were not taken to raise them in the home garden?

Did either the fruit or the vegetable disagree with the child? If so, ought I to have cooked it more thoroughly, chopped it more finely, or have removed the skins or seeds?

Was the child given sweets between meals, or anything that tempted him to eat when he was not hungry?

Was he allowed to eat sweets when he should have been drinking milk or eating cereals, meat, eggs, fruit, or vegetables?

Were the sweets given to the child simple, i. e., unmixed with much fat or with hard substances difficult to chew, and not highly flavored?

Was the child made to eat slowly and chew his food properly? If I gave the child ice water or ice cream, did I insist on its being taken slowly?